

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (currently amended) A system for detecting a rotational motion of a shaft in a machine housing comprising:

a seal disposed on the shaft;

a measuring transmitter connected to the shaft;

at least one measuring sensor provided on the machine housing; and

a measuring transducer connected to the measuring sensor;

a regulator that regulates the electric current; and

a transmitting unit for wireless transmission of measured quantities to a separately disposed electronic control device,

wherein the measuring sensor is supplied with electric current by a separate energy accumulator, and

the seal, the measuring sensor, regulator, energy accumulator, and transmitting unit are integrally combined into a single unit.

2. (Previously Presented) The system as defined in claim 1, wherein the electric current supplied by the energy accumulator is generated by a multipole ring connected to the shaft, and in cooperation with an oppositely disposed stator.

3. (Previously Presented) The system as defined in claim 1, wherein the electric current is regulated by a regulator inserted into an electric circuit.

4. (Cancelled)

5. (Previously Presented) The system as defined in claim 1, wherein the measuring transducer converts a sinusoidal measuring signal from the rotational motion of the shaft into a yes/no signal.

6. (Currently Amended) The system as defined claim 1, ~~further comprising a signal transmitting wherein the transmitting unit having~~ includes a radio antenna that transmits signals received from the measuring sensor on to an the electronic control device.

7. (Currently Amended) The system as defined in claim 1, wherein the measuring sensor measures at least one of a pressure, speed, position, a temperature, a leakage, or a torque at ~~in at least one of a the~~ space to be sealed off ~~and a in its surrounding area.~~

8. – 9. (Cancelled)

10. (Previously Presented) A sealing system for sealing a space between a shaft and a housing, comprising:

a seal connected to a sealing ring, said seal in contact with the shaft;

a support ring including a multipole ring connected to the shaft; and

a plurality of sensors electrically coupled to a current source and a signal transmitter,

wherein said signal transmitter is in wireless communication with a control device located within the housing.

11. (Previously Presented) The sealing system according to claim 10, further comprising a regulator coupled to said current source, said regulator regulating an electric current generated by said current source to each of said plurality of sensors.

12. (Previously Presented) The sealing system according to claim 10, wherein said plurality of sensors measure a rotational movement of the shaft, a pressure in a space to be sealed off by the sealing system, a leakage in the space to be sealed off, a temperature in the space to be sealed off, and a torque of the shaft.

13. (Previously Presented) The sealing system according to claim 10, wherein said current source comprises a battery.

14. (Previously Presented) The sealing system according to claim 10, wherein said signal transmitter comprises an antenna circuit for wireless transmission to said control device.

15. (Previously Presented) The sealing system according to claim 10, wherein said plurality of sensors are connected to the housing.

16. (Previously Presented) The sealing system according to claim 10, wherein said plurality of sensors are integrated into a unitary block inserted into a opening in the housing.

17. (Previously Presented) The sealing system according to claim 10, further comprising a stator coupled to said current source.